DIGITAL MIXER PRO2

Live Audio System Install Package with
64 Simultaneous Input Processing Channels
and 27 Sample-Synchronous, Phase-Coherent
Mix Busses

Service Bulletin

Fault Code	PCD WP UG
Issue	Fujitsu motherboard is no longer available
Remedy	Replace with an Advantech motherboard
Action	If the Fujitsu motherboard needs to be replaced, replace with an Advantech motherboard
Technician	Only authorized service technicians shall perform this procedure

Motherboard Replacement Instructions

Rework instructions to replace the existing Fujitsu motherboard with the new Advantech motherboard. This is only required if the motherboard has failed.

Preparation

The following tools and parts are required in order to perform the procedures described in this service bulletin.

Tools Required
T10 Torx Driver, 5mm Nut Driver, 5.5mm Nut Driver, Cutters, Dow Corning 738 Silicone adhesive

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Please order the PRO2 Motherboard replacement kit, Q09-AHK00-00000.
This kit contains the following items:

Parts Kit		
Qty	Description	Part Number
1	DVI TO DISPLAY PORT ADAPTOR PLATE	A60-00000-96205
1	ADVANTECH MOTHERBOARD RESET CABLE	A87-00000-91343
1	CABLE ADVANTECH MOTHERBOARD 12V POWER CABLE	A87-00000-91344
1	ADVANTECH MOTHERBOARD EXT SCREEN DP++ CABLE	A87-00000-91538
1	PRO2 ADVANTECH M/B AND NEC SCREEN HANDBAG	A87-00000-96909
1	PRO2 ADVANTECH M/B AND ADVANTECH SCREEN HANDBAG	A87-00001-21646
1	ADVANTECH MOTHERBOARD	B52-00000-92866
1	M3X08 PAN HEAD TORX SCREW	F88-00001-05245
4	M3X10 PAN HEAD TORX SCREW	F88-00001-02375
2	M3X12 PAN HEAD TORX SCREW	F88-00001-05246
6	M3 INTERNAL TOOTH WASHER	F96-00000-07676
2 x 20mm	CONDUCTIVE_SPONGE	F97-00000-83715
4	PLASTIC SPACER	G53-00000-22755
25	142mmx 3.6mm Cable tie	F83-00000-38329
1	Advantech screen cable for old MKT-PSU10	A87-00001-30644
1	NEC screen cable for old MKT-PSU10	A87-00001-31422

Torque Setting				
Screw Size	Description	Driver Size	Torque (Nm)	Torque (kgf.cm)
M3	M3 x 06 Pan Head Torx	TORX T10	0.7Nm	7.138 kgf.cm
M3	M3 x 06 CSK nickel Torx	TORX T10	0.7Nm	7.138 kgf.cm
M3	M3 x 08 Pan Head Torx	TORX T10	0.7Nm	7.138 kgf.cm
M3	M3 x 10 Pan Head Torx	TORX T10	0.7Nm	7.138 kgf.cm
M3	M3 x 12 Pan Head Torx	TORX T10	0.7Nm	7.138 kgf.cm

Warning: Follow all standard safety precautions when performing this procedure. Failure to follow instructions may lead to permanent injury or death.

Warning: Please review any previous service bulletin for this model.

Caution: Follow all standard ESD precautions when performing this procedure. Failure to follow instructions may cause damage to the unit being repaired.

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Procedure

Notes:

Follow all steps in the order in which they are presented.

Disconnect the power cord and all other connections to the unit under repair.

Risk of electrical shock due to high voltage discharge, even when the unit is off.

Retain any screws removed for re-assembling the console.

For those connectors secured with silicone glue: once the connectors are removed, make sure that all the old silicone is removed. Add a small amount of silicone glue once the connector has been re-fitted.

STEP 1

Remove 32 off M3 x 6 CSK screws securing fascia panels in place.

STEP 2

Lift the Top Panel Assembly.

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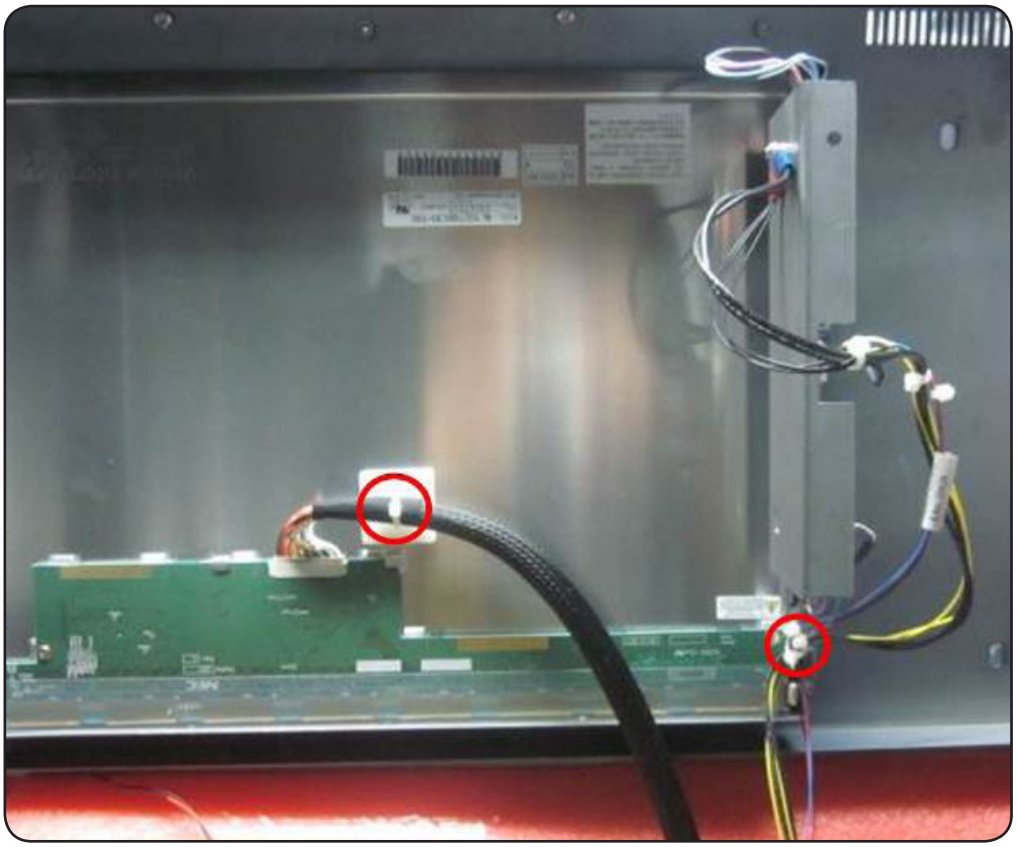
STEP 3

Cut 2 off Cable ties securing the cable looms to the sub assembly.



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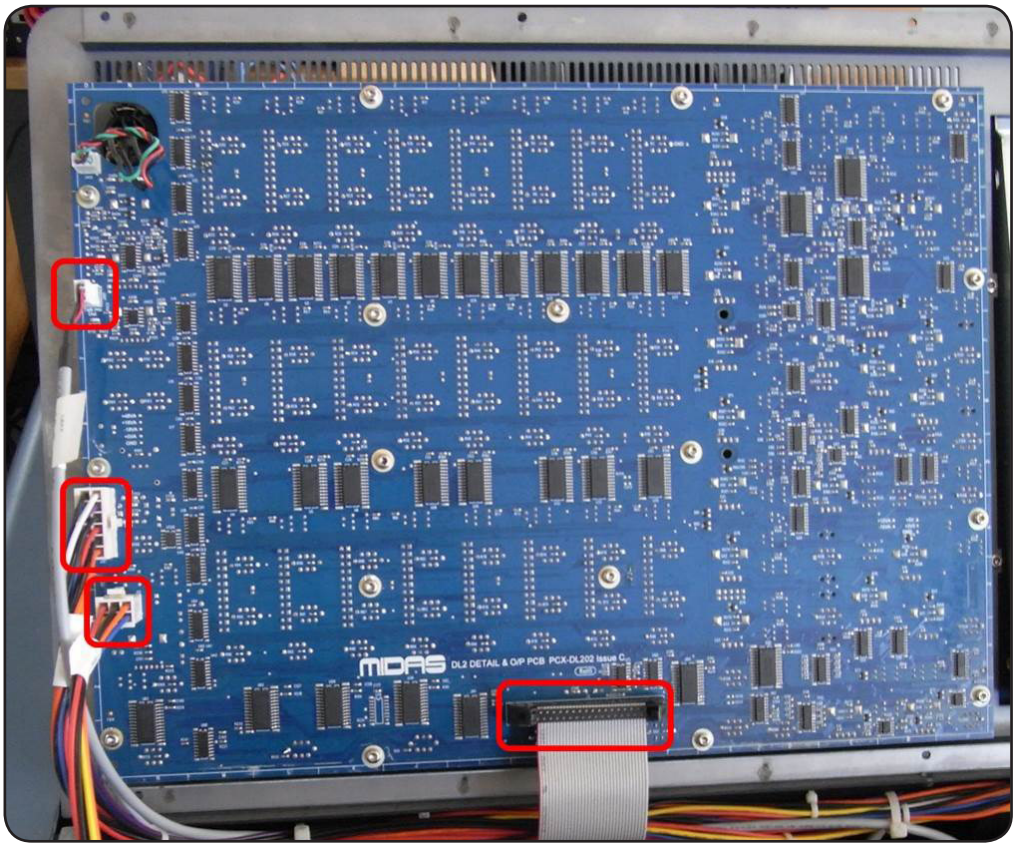
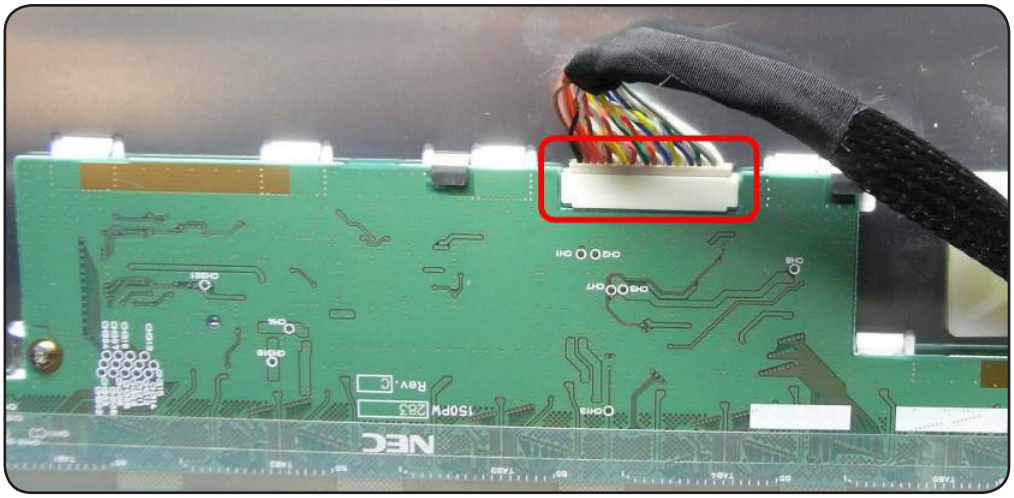
STEP 4 Disconnect cables as shown, make a note of the cable position for re-assembly.



STEP 5 Disconnect the LVDS connection from the screen.



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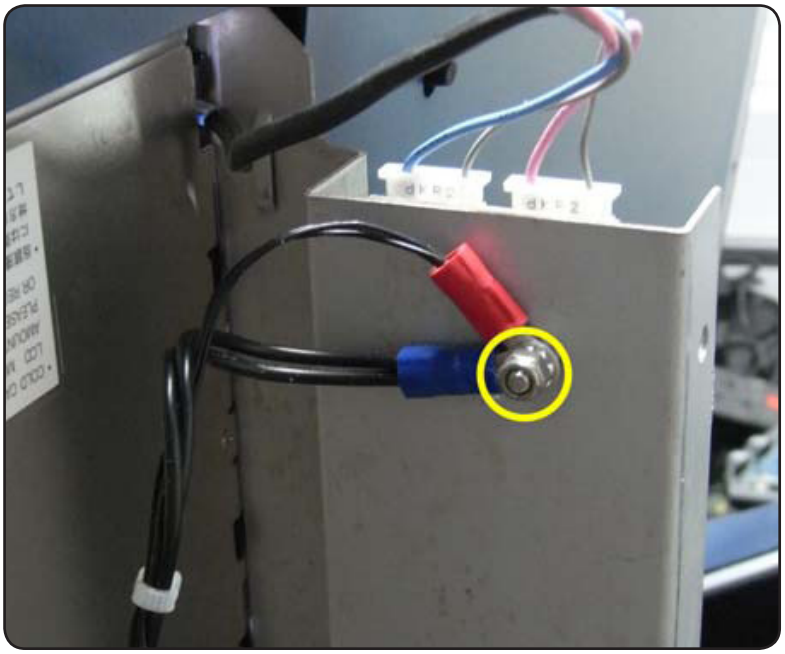
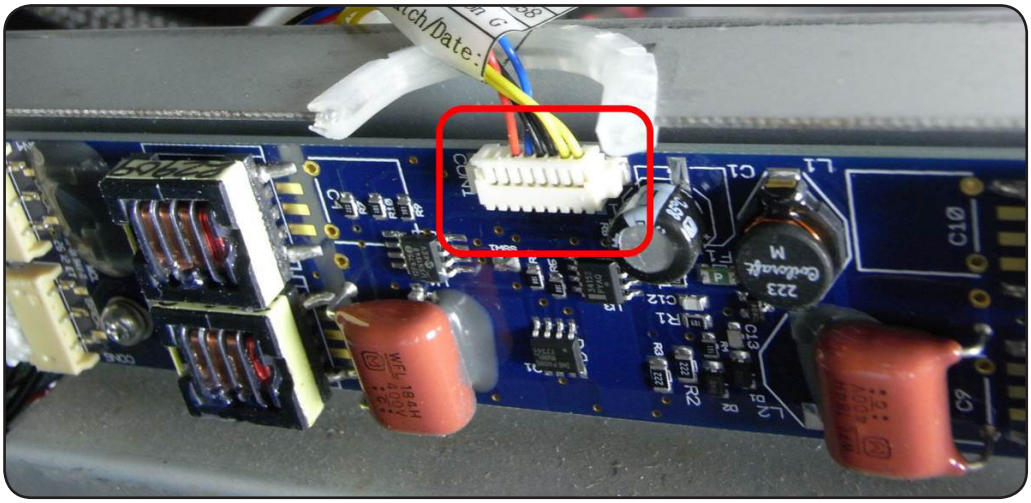
STEP 6 Using a 5.5mm Nut Driver remove M3 Lock nut securing inverter cable ground tags to the screen carrier assembly.



STEP 7 Disconnect the inverter cable from CON1 on the inverter board.



STEP 8 Remove Top Panel Assembly and store in a safe place.

STEP 9 Lift the Fader Panel Assembly.

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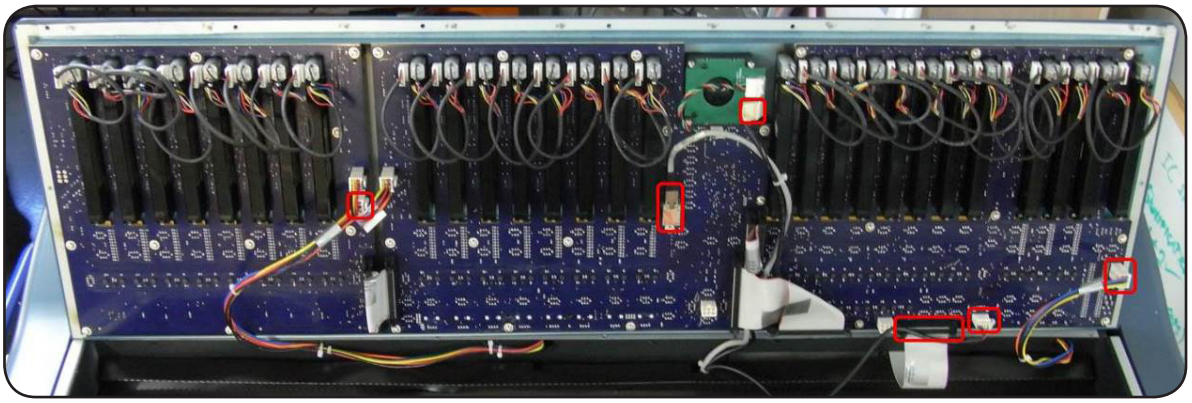
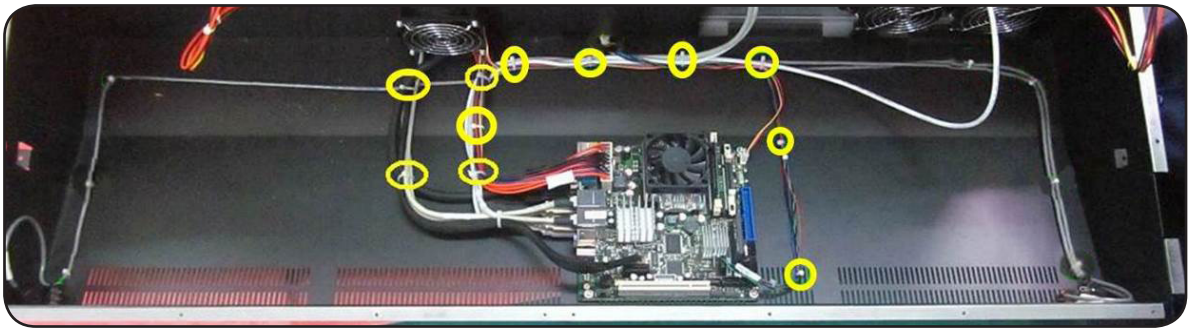
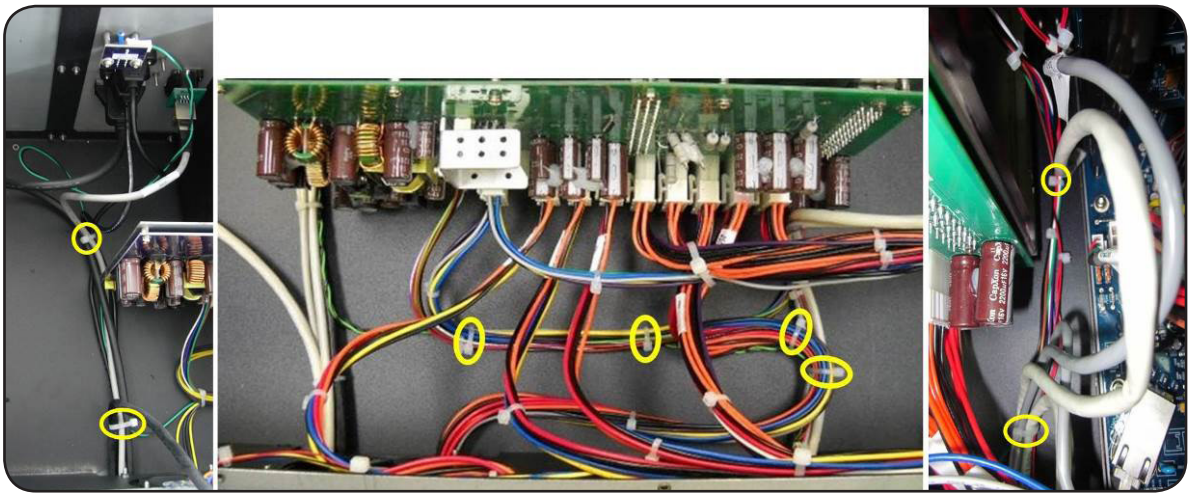
STEP 10 Disconnect cables as shown, make a note of the cable position for re-assembly.



STEP 11 Remove Fader Panel Assembly and store in a safe place.

STEP 12 Cut 19 Off cable ties as shown.





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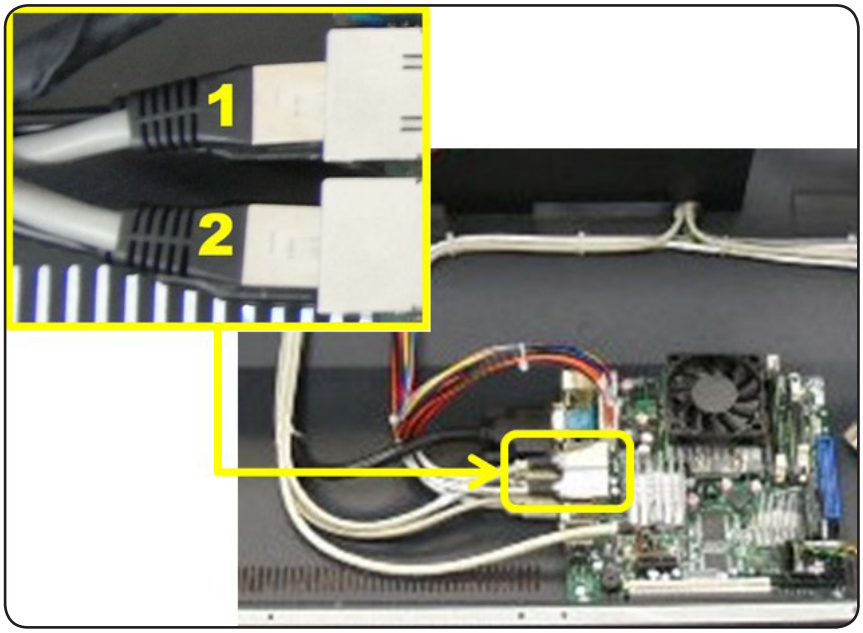
STEP 13

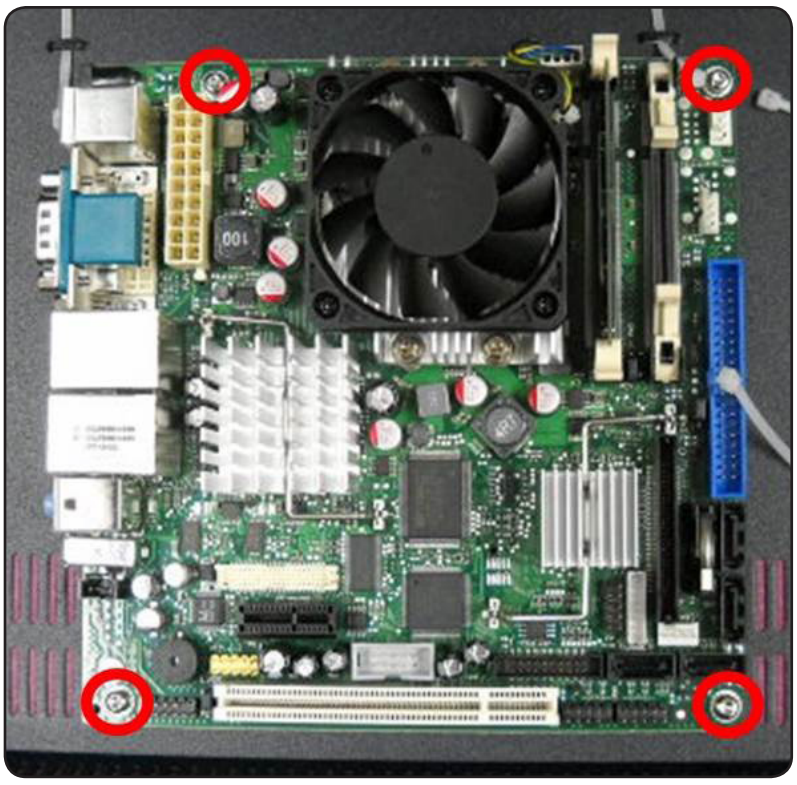
Disconnect all cables from the Motherboard.

Note: Label Ethernet connectors to ensure correct position when re-fitted later.



STEP 14

Remove 4 Off M3 x 6 Pan head with flat washer screws and remove the motherboard.



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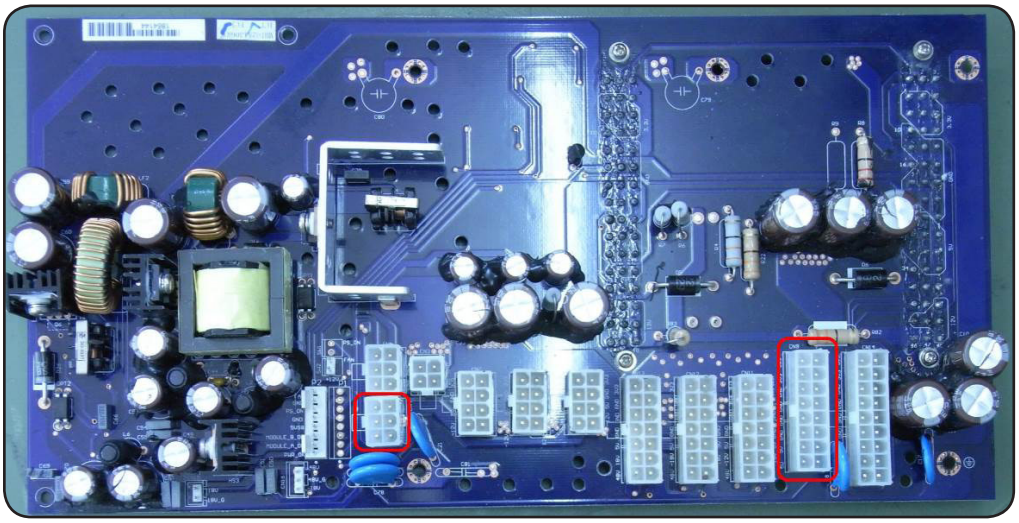
STEP 15

Disconnect power cable from CN9 & CN4 on the power Distro PCB.

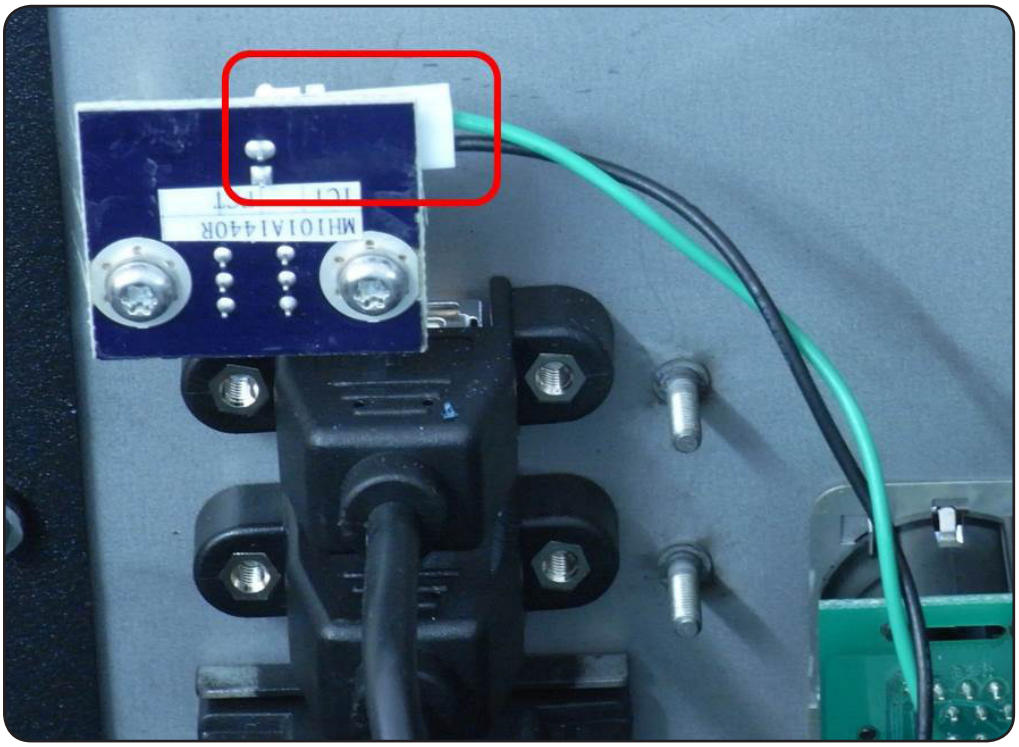


STEP 16

Remove cable from the console.

STEP 17

Disconnect Reset cable from the Reset switch PCB (at the rear of the console).



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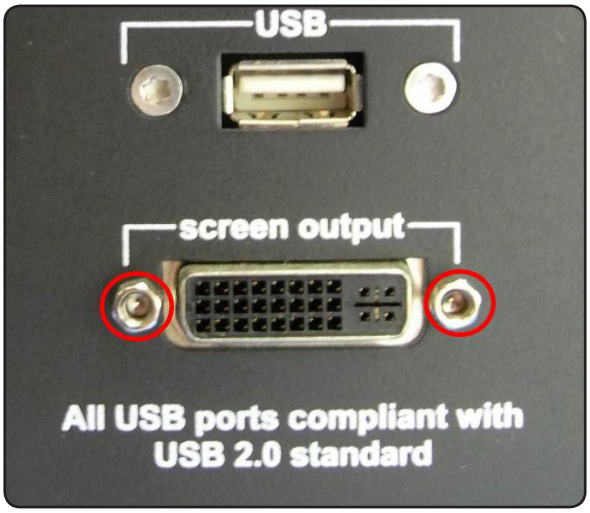
STEP 18 Remove the reset cable from the console.

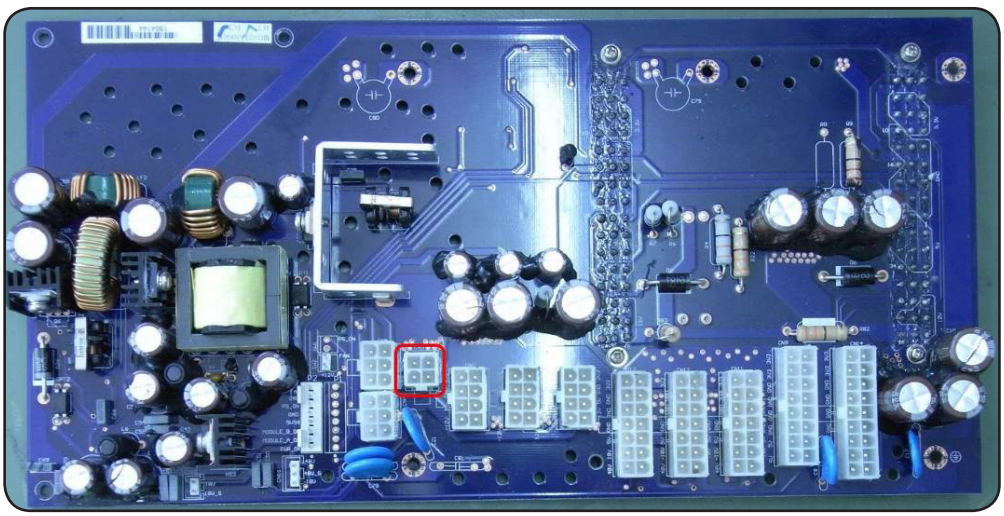
STEP 19 Remove 2 Off screw connectors from the Screen Output DVI connector on the rear of the console.



STEP 20 Remove DVI cable from the console.

STEP 21 Remove LVDS cable (previously disconnected from the Motherboard) from the console.

STEP 22 Disconnect invertor cable from **CN3** on the power Distro PCB.



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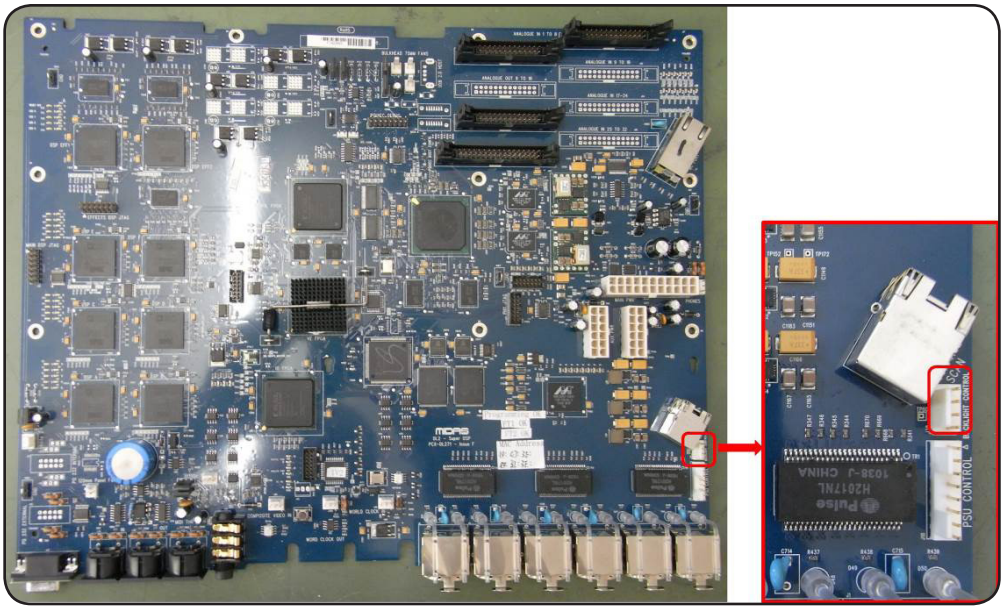
STEP 23

Disconnect inverter cable from **J28** on the DL271 PCB

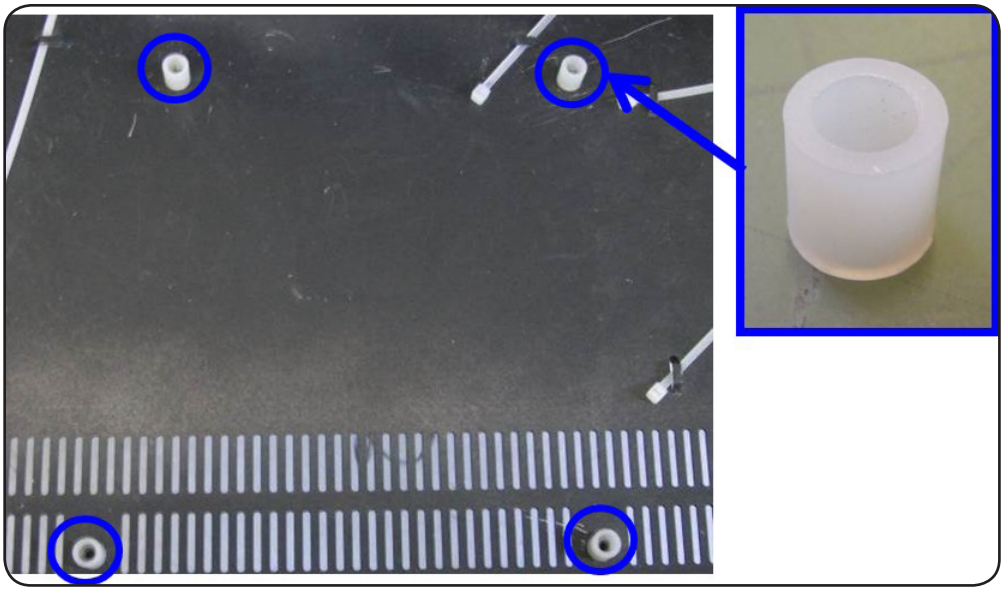


STEP 24

Remove cable from the console.

STEP 25

Fit 4 off Plastic spacers (G53-00000-22755 / MWX-V000M26-1).



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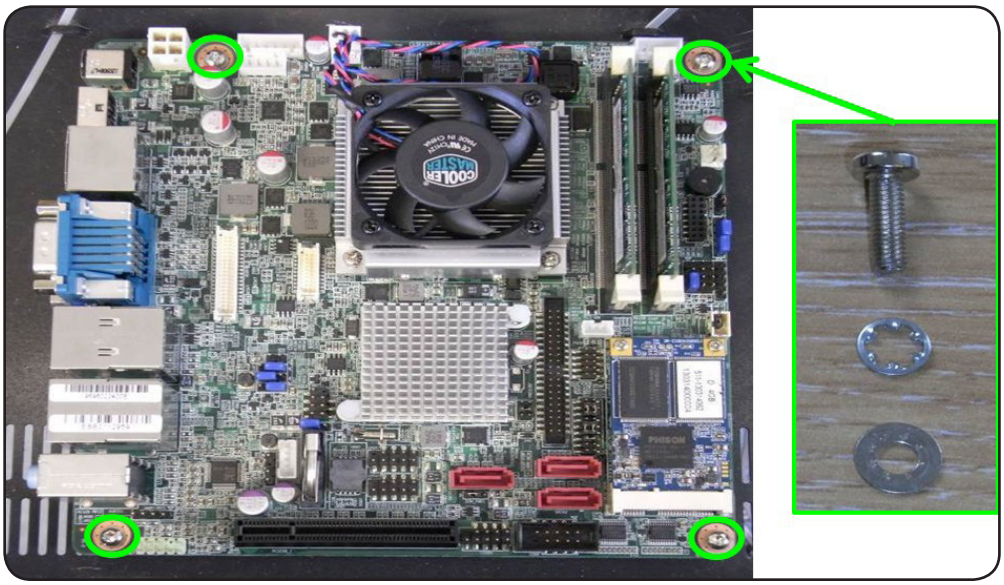
STEP 26

Fit 1 off Advantech motherboard (B52-00000-92866 / DL5104-02) and secure in place using the following -

4 Off M3 x 10 screw (F88-00001-02375 / FAS21-M3X10PS)

4 Off M3 internal washer s (F96-00000-07676 / FAS03-M30SZ)

4 Off F96-00000-27740: M3 plain washer (previously removed)



STEP 27

Affix 2 Off 20mm pcs of conductive foam (F97-00000-83715) along the long edge of the DP cut out on the inside of DVI To Display Port Adaptor plate (A60-00000-96205).

Note: Conductive foam must be placed as close to the cut out edge as possible.

Take care to ensure no foam is visible from the front face of A60-00000-96205.

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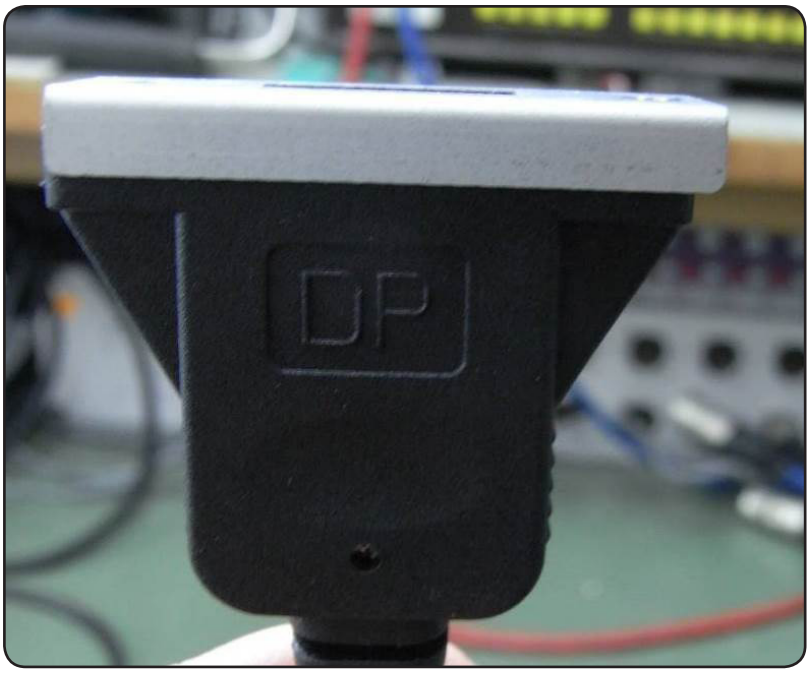
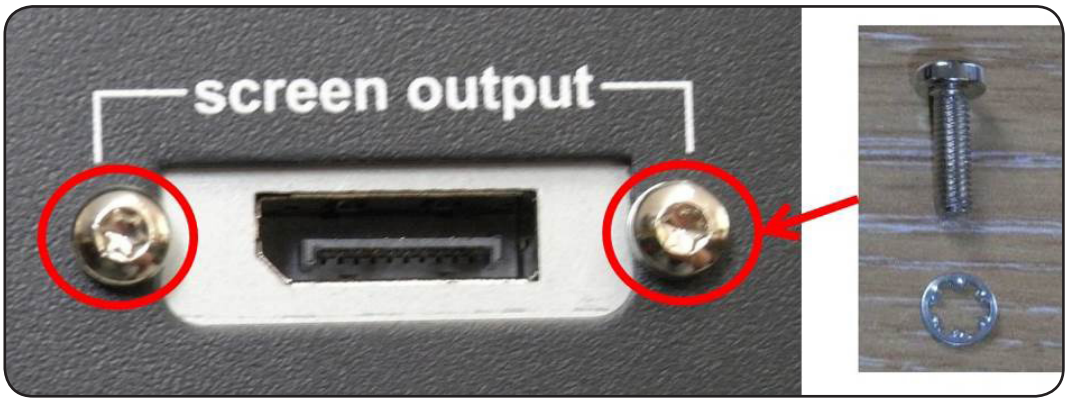
STEP 28 Fit DVI To Display Port Adaptor plate (A60-00000-96205) over the end of the External SCREEN DP++ Cable (A87-00000-91538)



STEP 29 Fit assembly into the rear of the console, secure in place using 2 Off M3X12 Pan Head Torx Screw (F88-00001-05246) and 2 Off M3 internal washers (F96-00000-07676).
Note: Torque setting 0.4Nm / 4.082kgf.cm



STEP 30 Feed the cable through to the front of the console.

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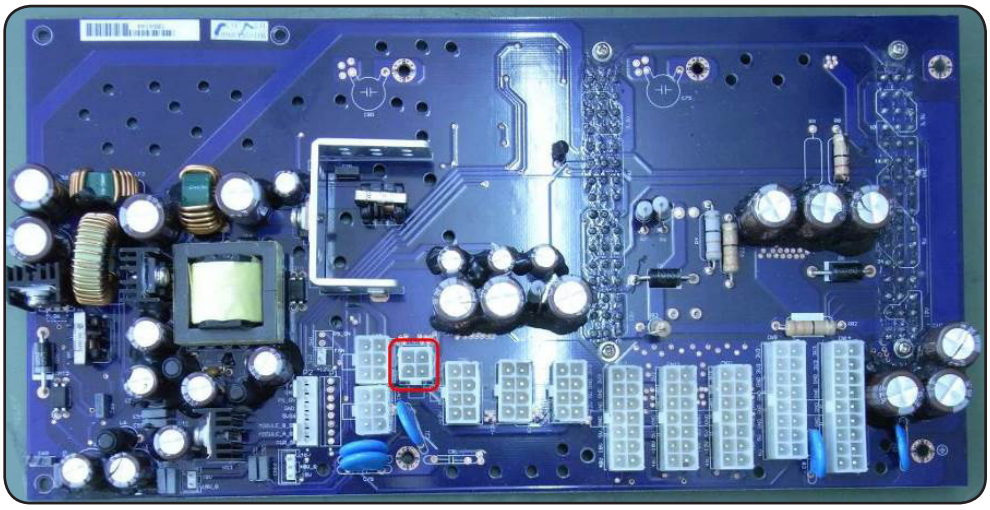
STEP 31 Connect new Advantech Motherboard Reset cable (A87-00000-91343) to the Reset switch PCB (at the rear of the console).

STEP 32 Feed the cable through to the front of the console.

STEP 33 Connect the 12V Power Cable (A87-00000-91344) to CN3 on the power Distro PCB.



STEP 34 Feed the cable through to the front of the console.

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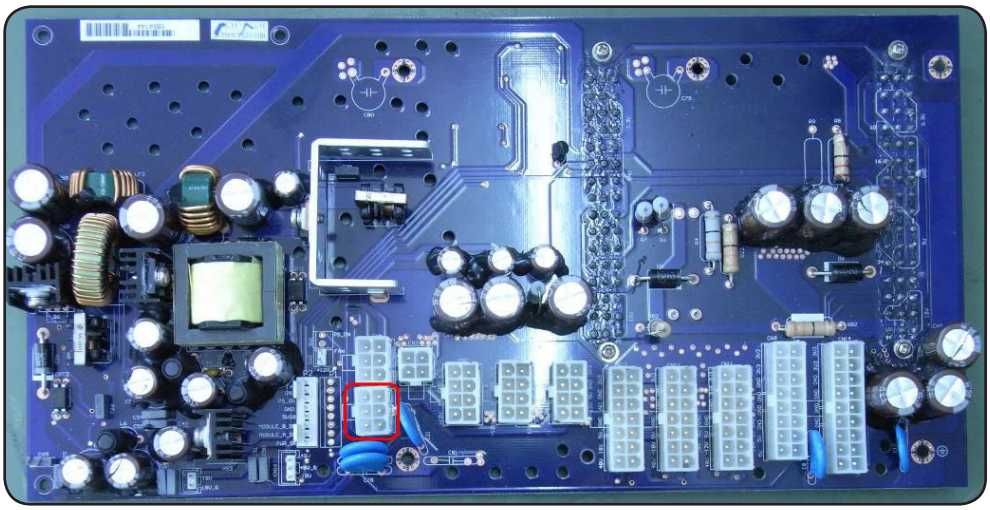
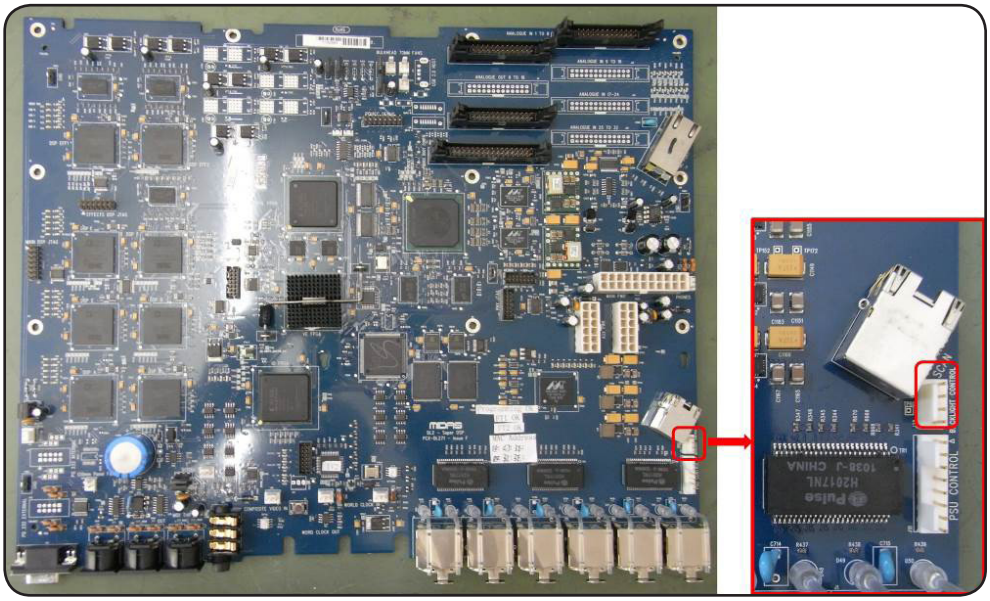
STEP 35

Connect Inverter Cable (A87-00001-31422 – end nearest Label D) to **CN4** on the power Distro PCB.



STEP 36

Connect inverter cable (A87-00001-31422 – end nearest Label C) to **J28** on the DL271 PCB



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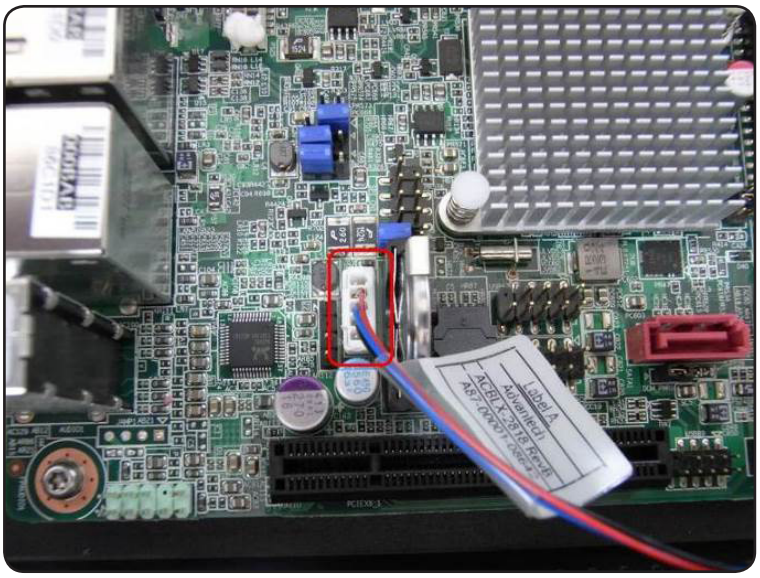
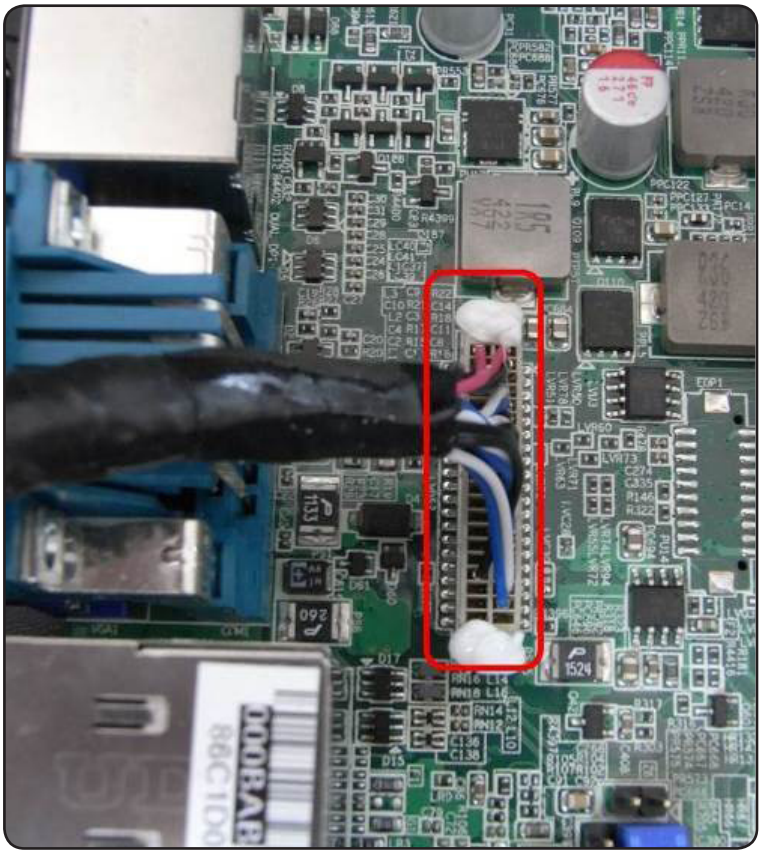
STEP 37 Feed Inverter Cable connector (A87-00001-31422 – end nearest Label A) through the console frame and connect to the Motherboard.



STEP 38 Connect LVDS cable to the Advantech Motherboard.



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STEP 39

Feed cable through the console to the rear section.

Note: If the console is fitted with an Advantech screen please follow **Appendix 1** for connection details.

STEP 40

Connect 12V Power Cable to the Motherboard.

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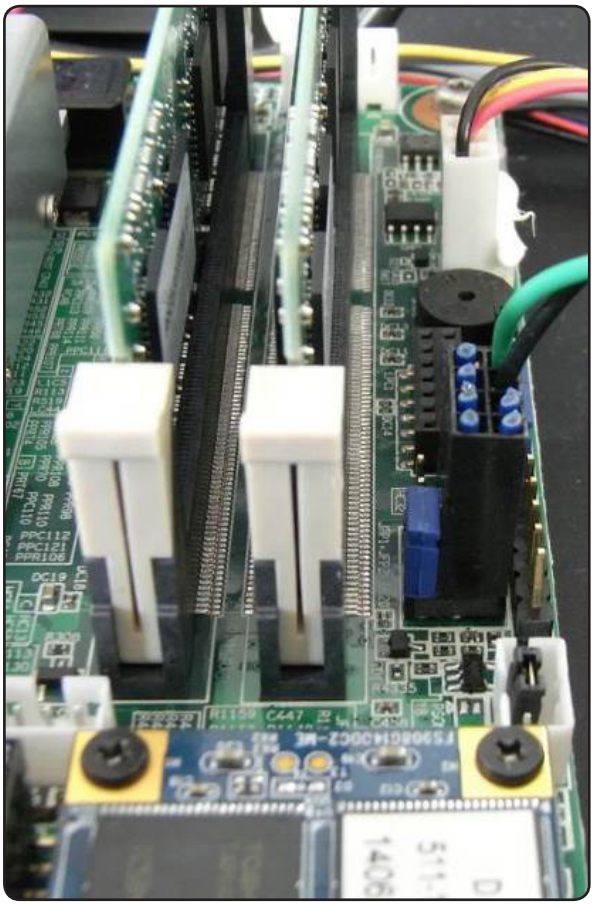
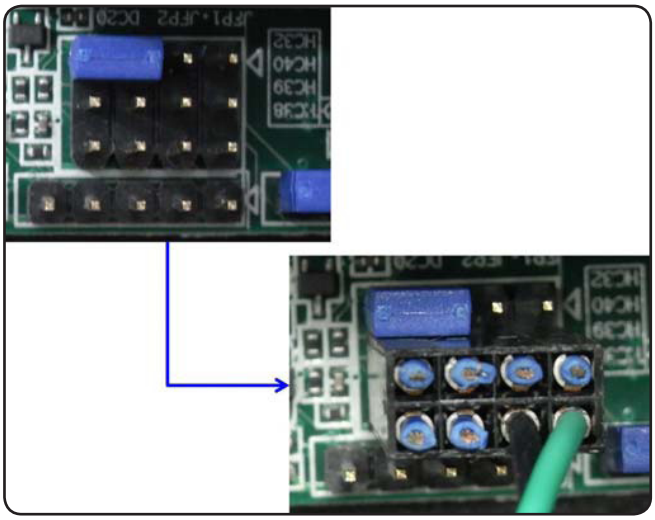
STEP 41

Connect the Reset Cable to the Motherboard.



Ensure correct orientation of connector when fitted.



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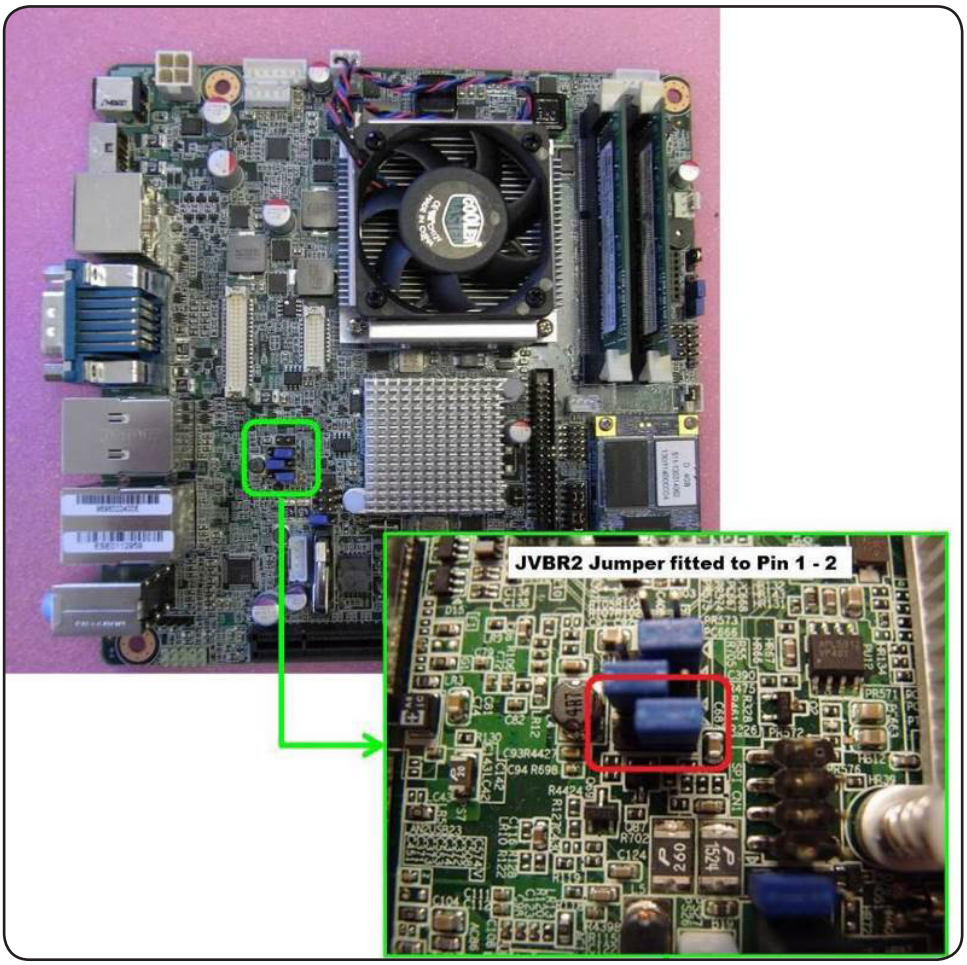
STEP 42

On the Advantech motherboard ensure the LVDS Brightness control jumper is between Pin 1 - 2 on JVBR2.



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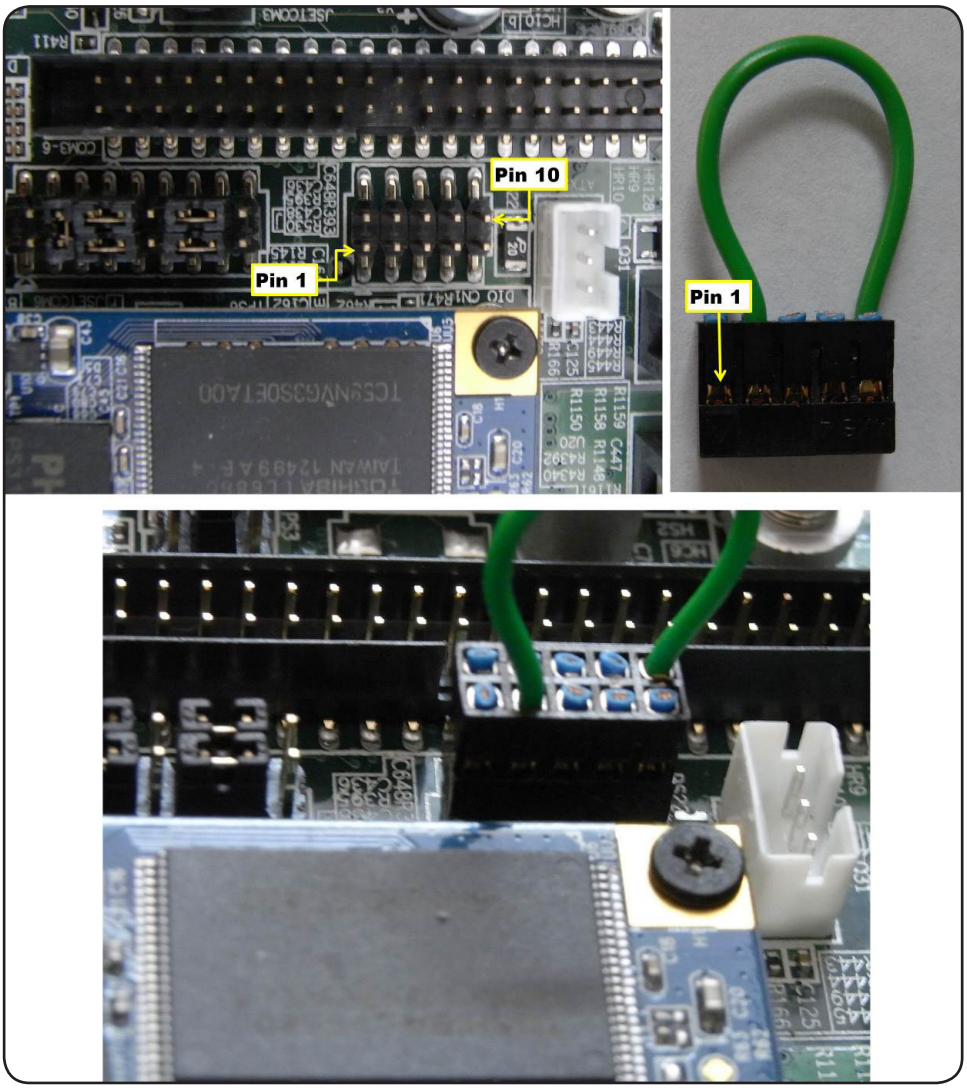
STEP 43

Fit Advantech Motherboard / NEC screen handbag cable. (A87-00000-96909) Ensure correct orientation



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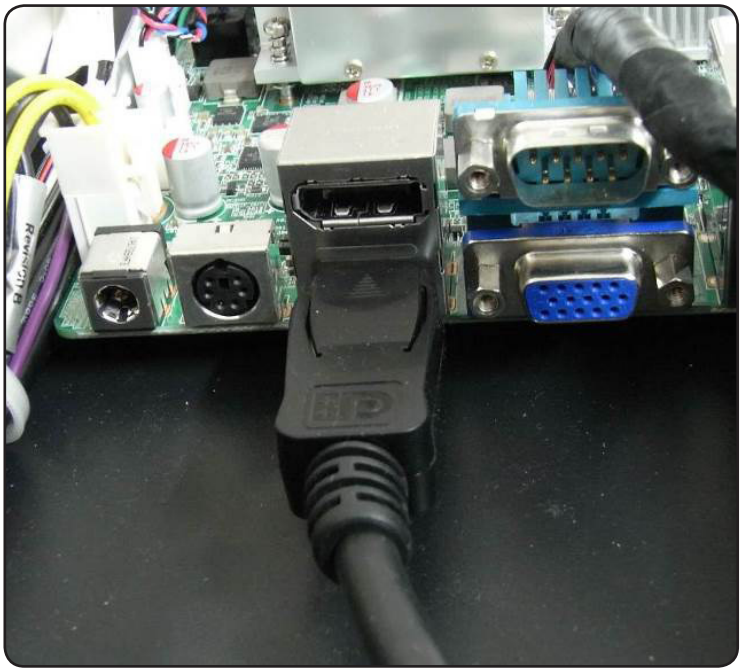
STEP 44

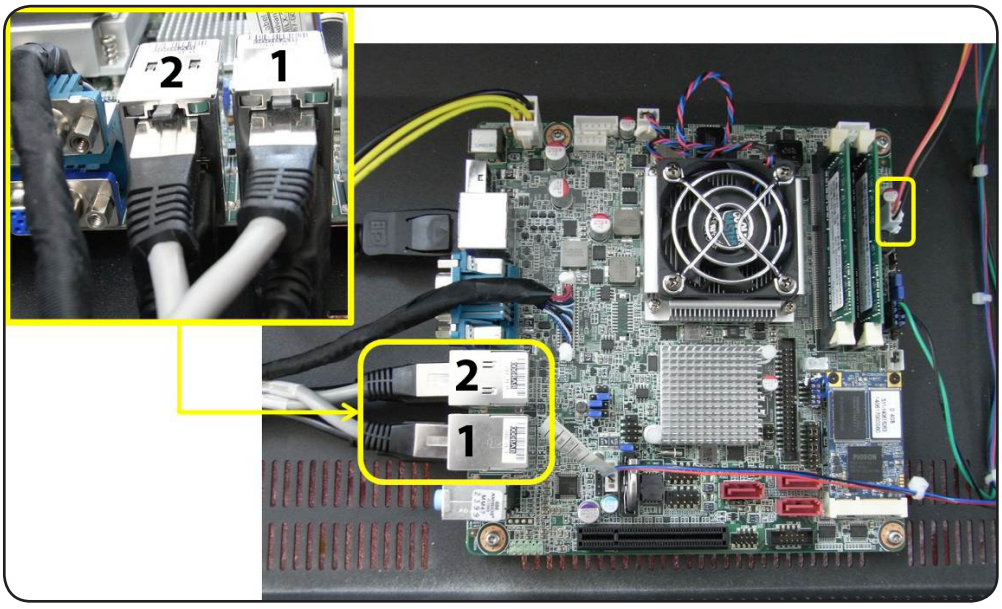
Connect External SCREEN DP++ Cable to the motherboard.



STEP 45

Re-connect all remaining cables.

Note: Ethernet Cables 1 and 2 are swapped around when reconnecting to the Advantech Motherboard.



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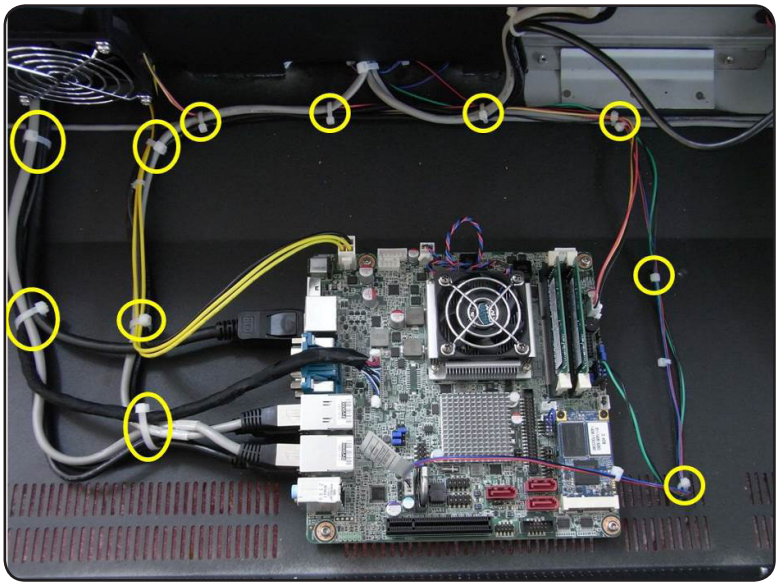
STEP 46

Dress and secure cables using 11 Off cable ties as shown.

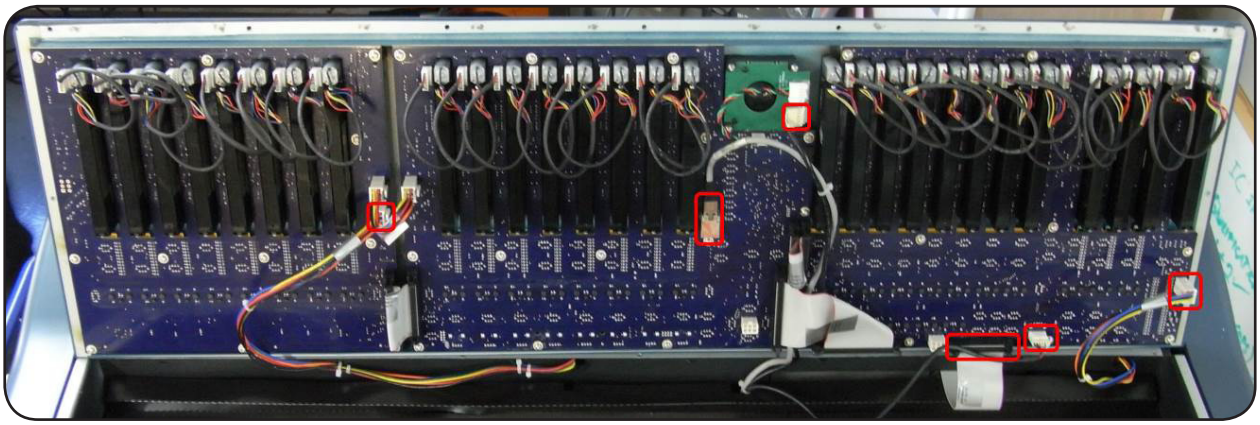


STEP 47

Re-position the Fader Panel Assembly.

STEP 48

Re-connect cables as shown.



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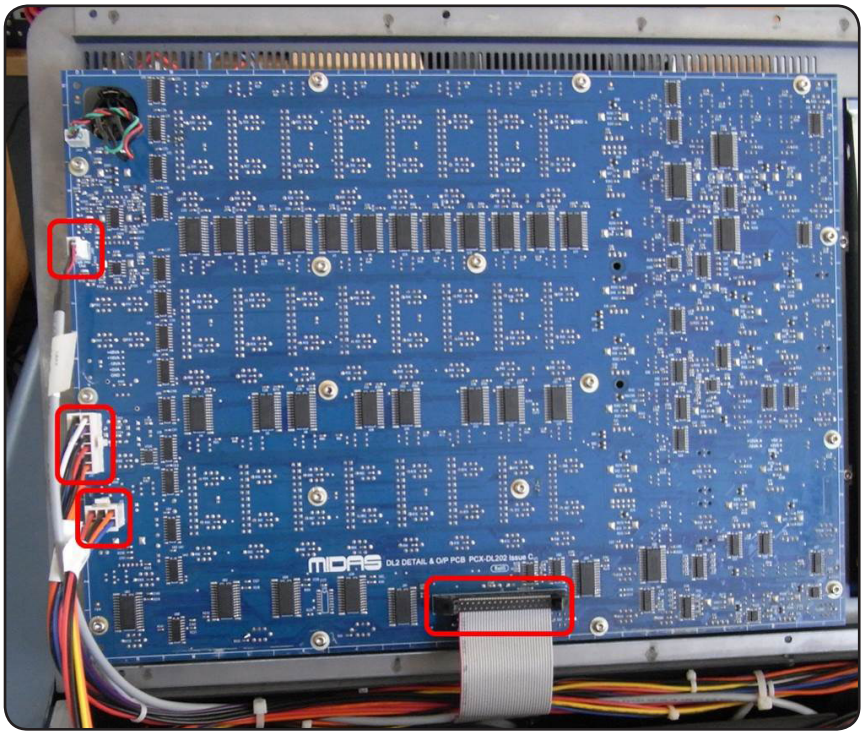
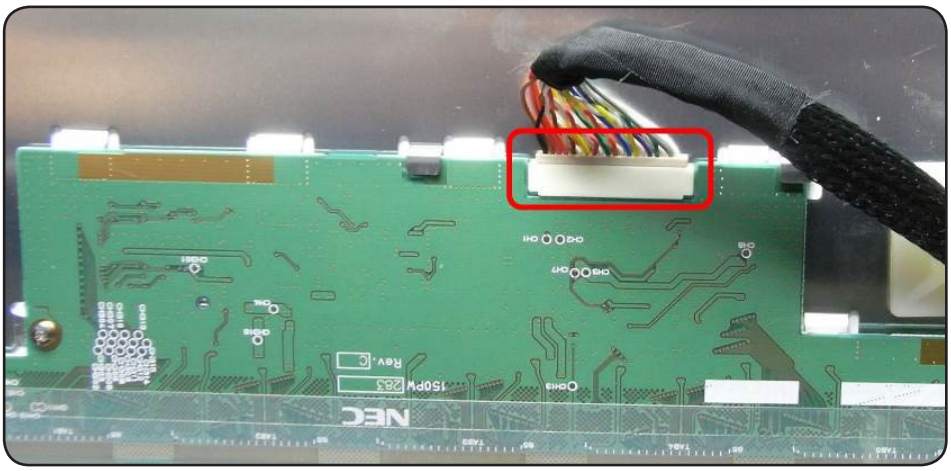
STEP 49

Re-position the Top Panel Assembly and attach cables as shown.



STEP 50

Re-connect the LVDS connection from the screen.



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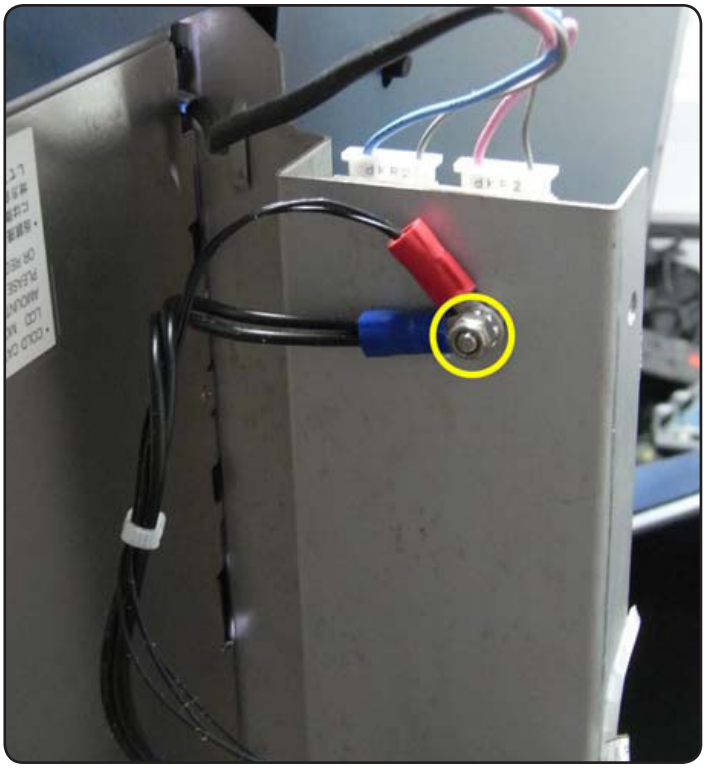
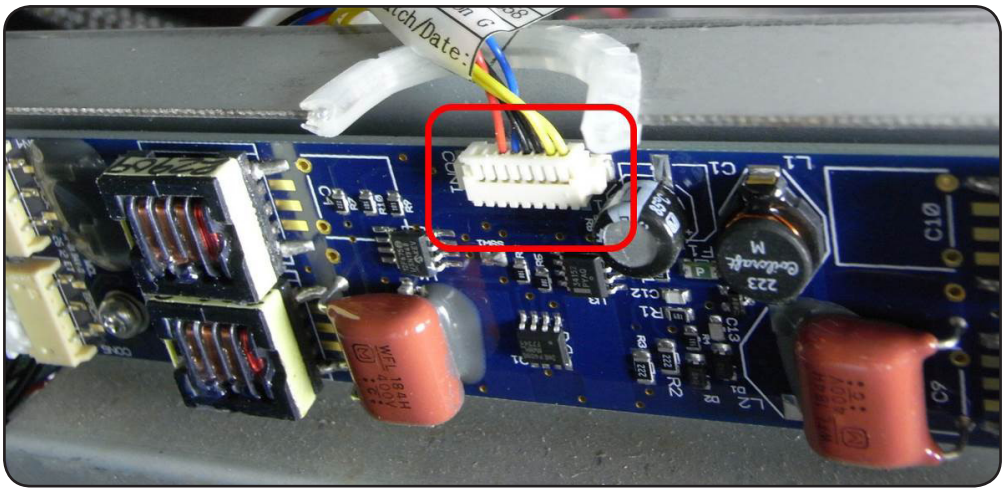
STEP 51

Securing inverter cable ground tags to the screen carrier assembly, using the M3 Lock nut previously removed.



STEP 52

Re-connect the inverter cable (A87-00001-31422 – end nearest Label B) to the inverter board.



Note: If the console is fitted with an Advantech screen please follow Appendix 1.1 for connection details.

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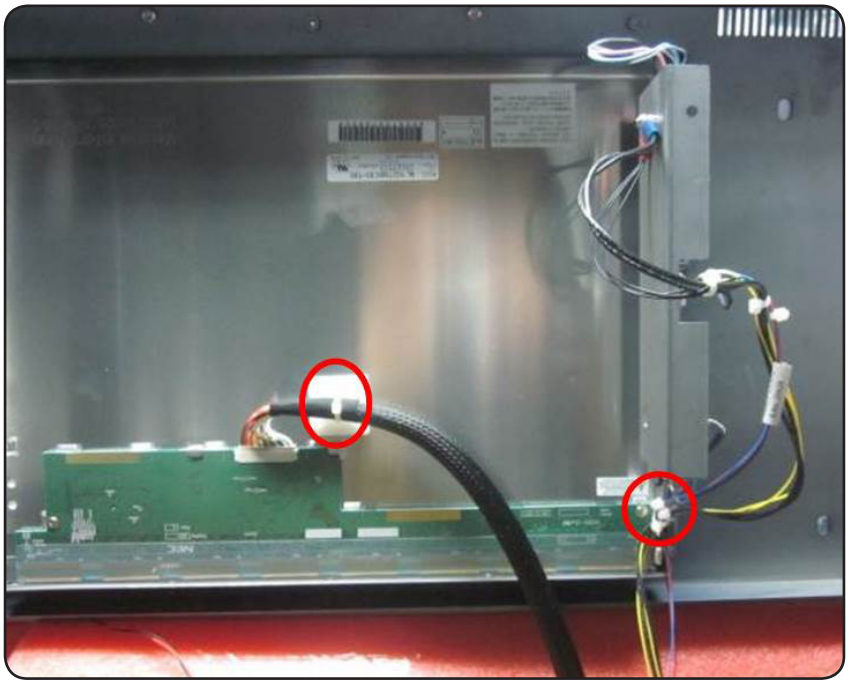
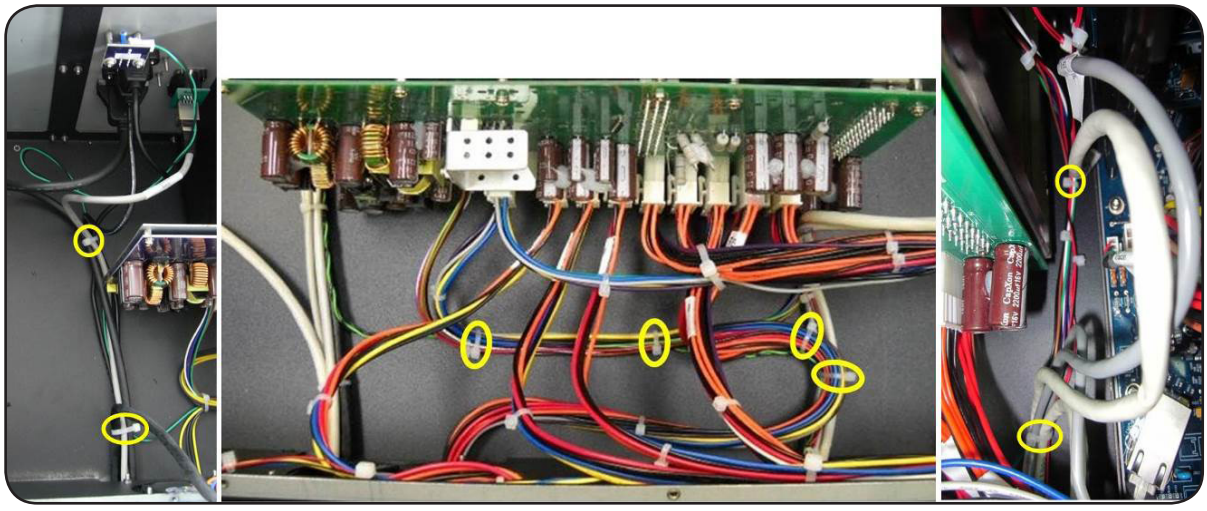
STEP 53

Secure LVDS cable and Inverter cable in place using 2 Off Cable ties.



STEP 54

Re-dress and secure cable looms in place using 8 Off cable ties as shown.



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PRO2

STEP 55 Re-secure facia panels in place using 32 off M3 x 6 CSK screws securing fascia panels in place.

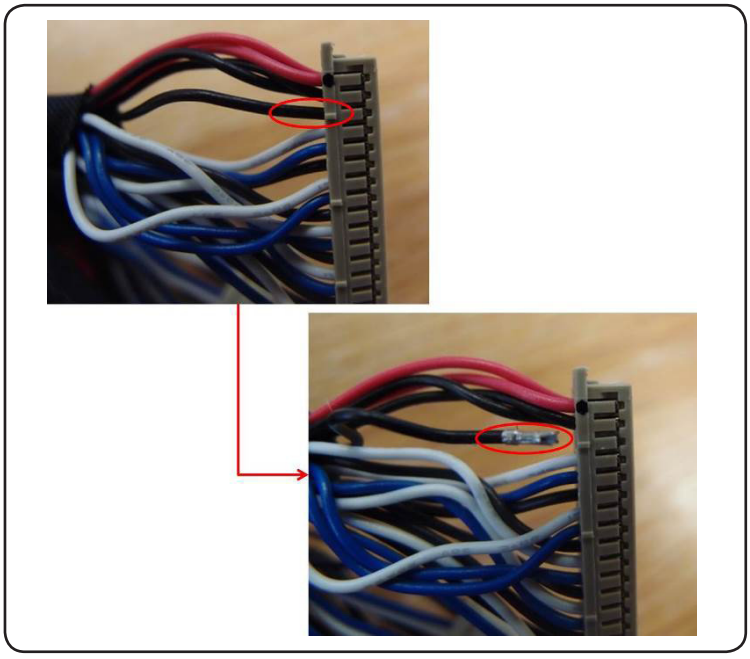
STEP 56 Perform a functional test and safety test to verify the console is working correctly.

Appendix 1

Console fitted with Advantech screen

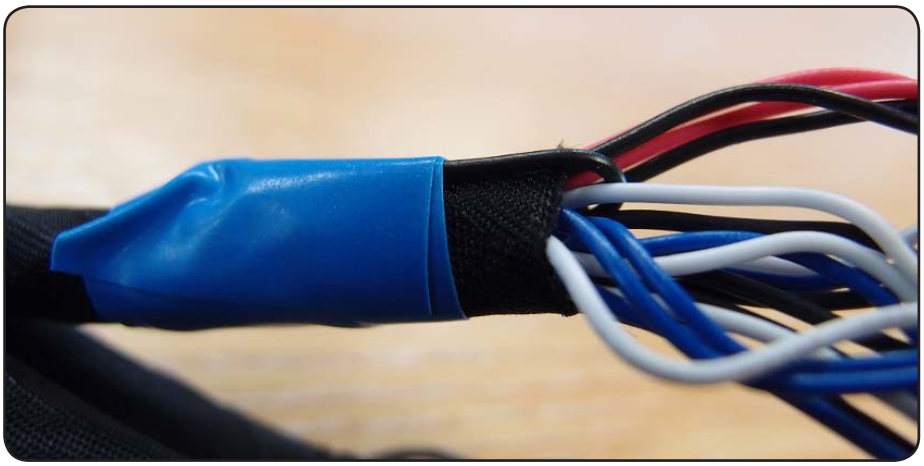
STEP 1

Modify the LVDS cable (as supplied with Advantech motherboard). Remove Pin 5 from the 40way connector (VDDSAFE connection)



STEP 2

Dress the removed cable back using a small amount of insulation tape. Ensure the crimp is covered to avoid the pin shorting.



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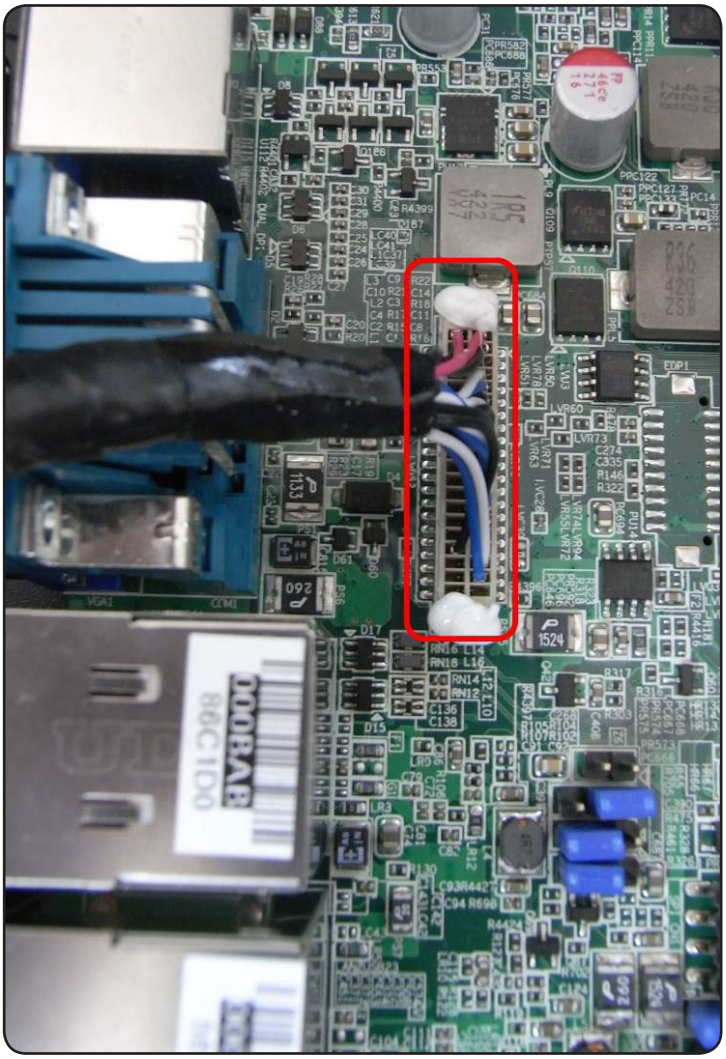
PRO2

STEP 3 Connect LVDS cable to the Advantech Motherboard.



STEP 4 Feed cable through the console to the rear section.

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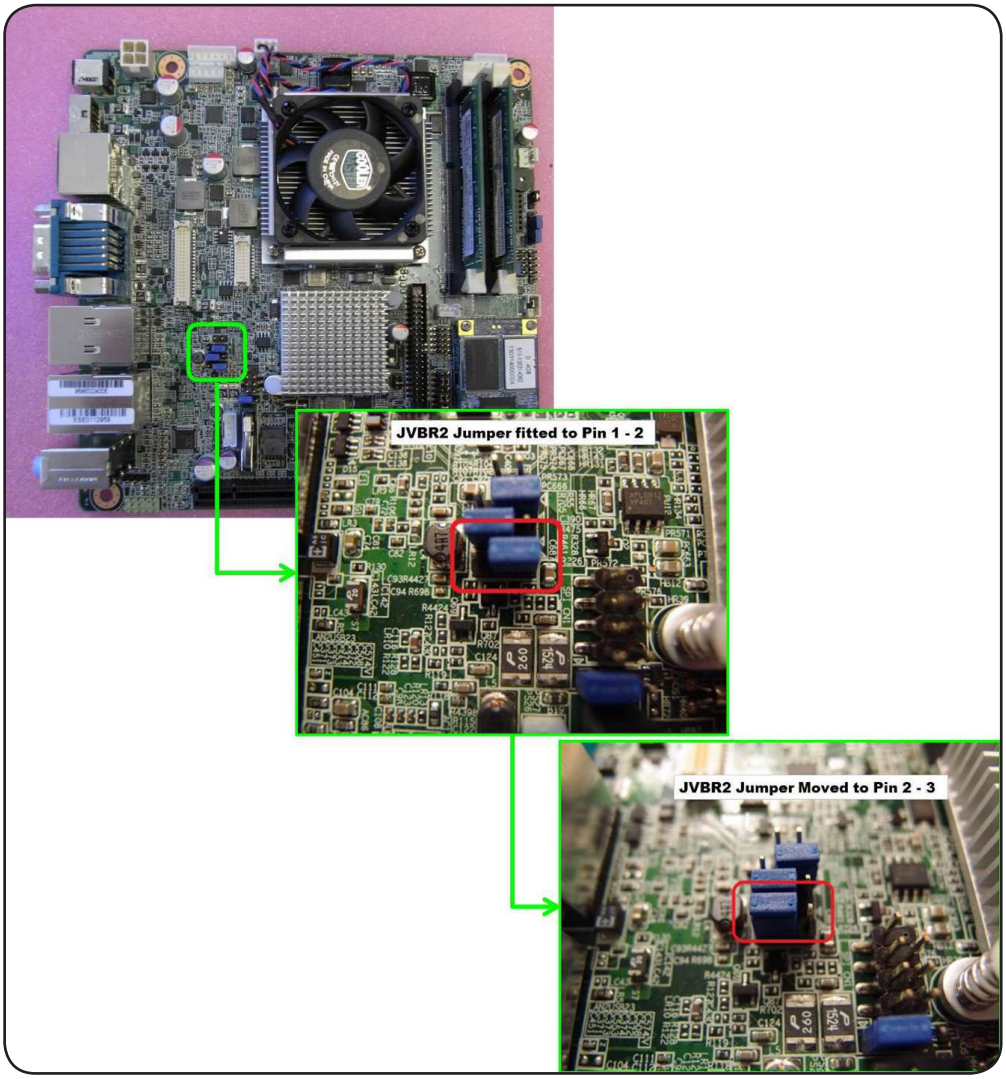
STEP 5

On the Advantech motherboard move the LVDS Brightness control jumper from Pin 1 - 2 to Pin 2 – 3 on JVBR2.



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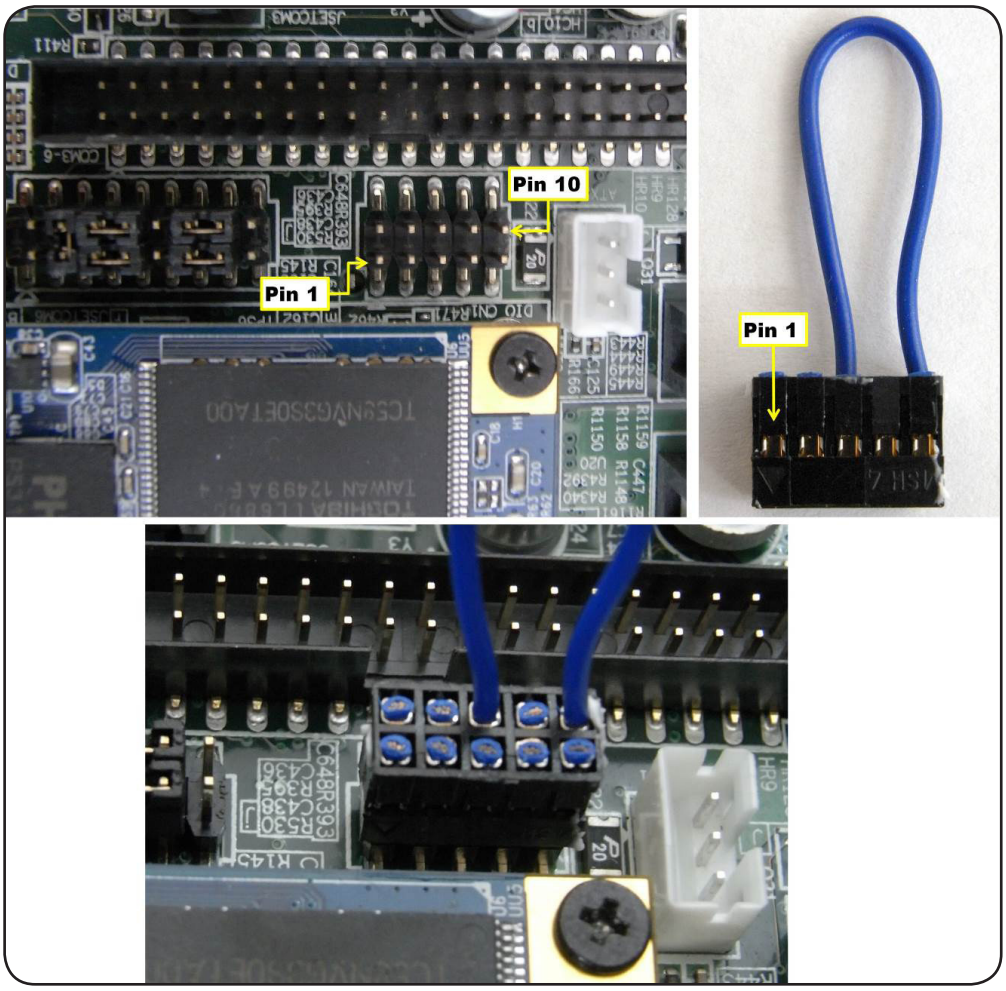
PRO2

STEP 6

Fit Advantech Motherboard / Advantech screen handbag cable. (A87-00001-21646).
Ensure correct orientation.



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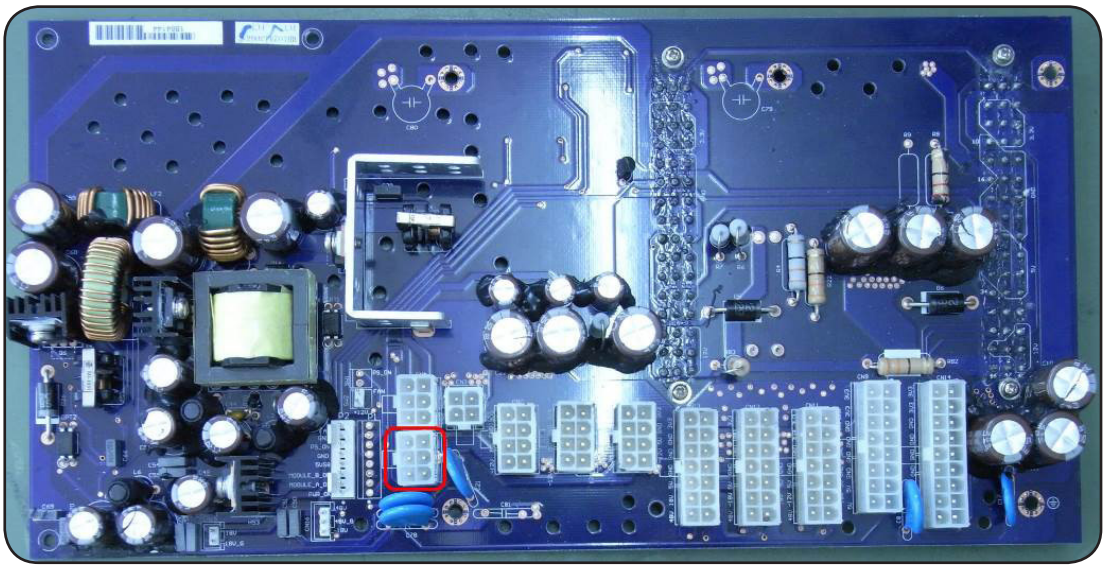
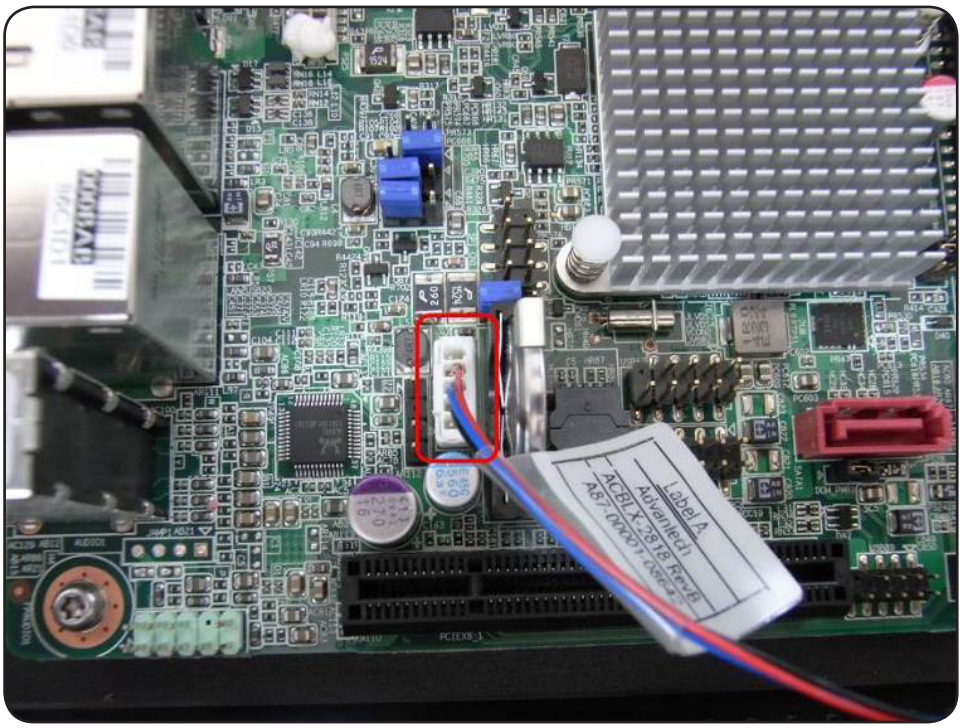
STEP 7 Connect LED Driver Cable (A87-00001-30644 – end nearest Label C) to CN4 on the power Distro PCB.



STEP 8 Feed LED Driver Cable connector (A87-00001-30644 – end nearest Label C) through the console frame and connect to the Motherboard.

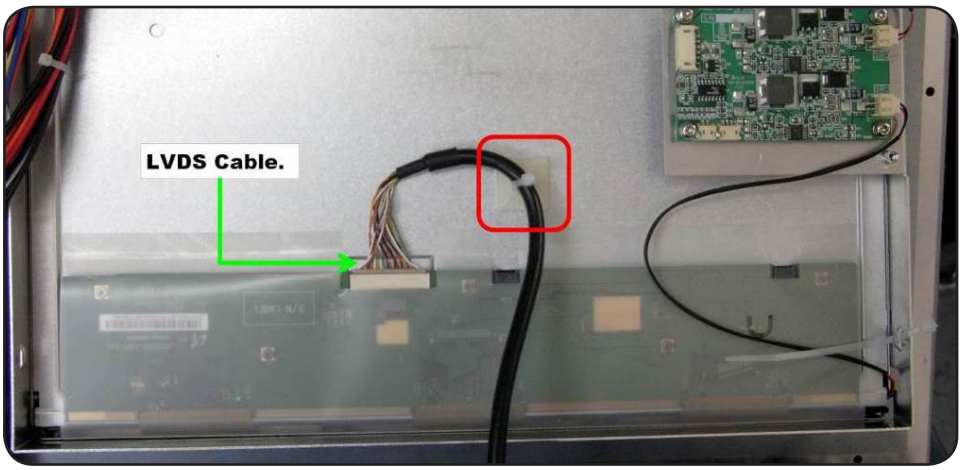


Appendix 1.1

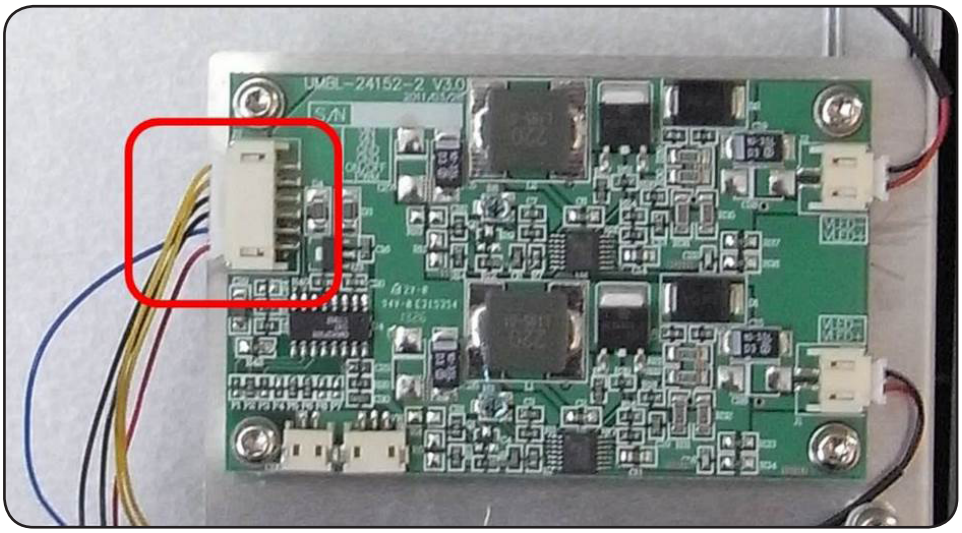
Console fitted with Advantech screen

STEP 1 Place the Top Panel Assembly into position.

STEP 2 Connect LVDS cable to LCD and secure using 1 Off Cable tie.



STEP 3 Connect LED Driver Cable (A87-00001-30644 – end nearest Label B) to LED driver board.



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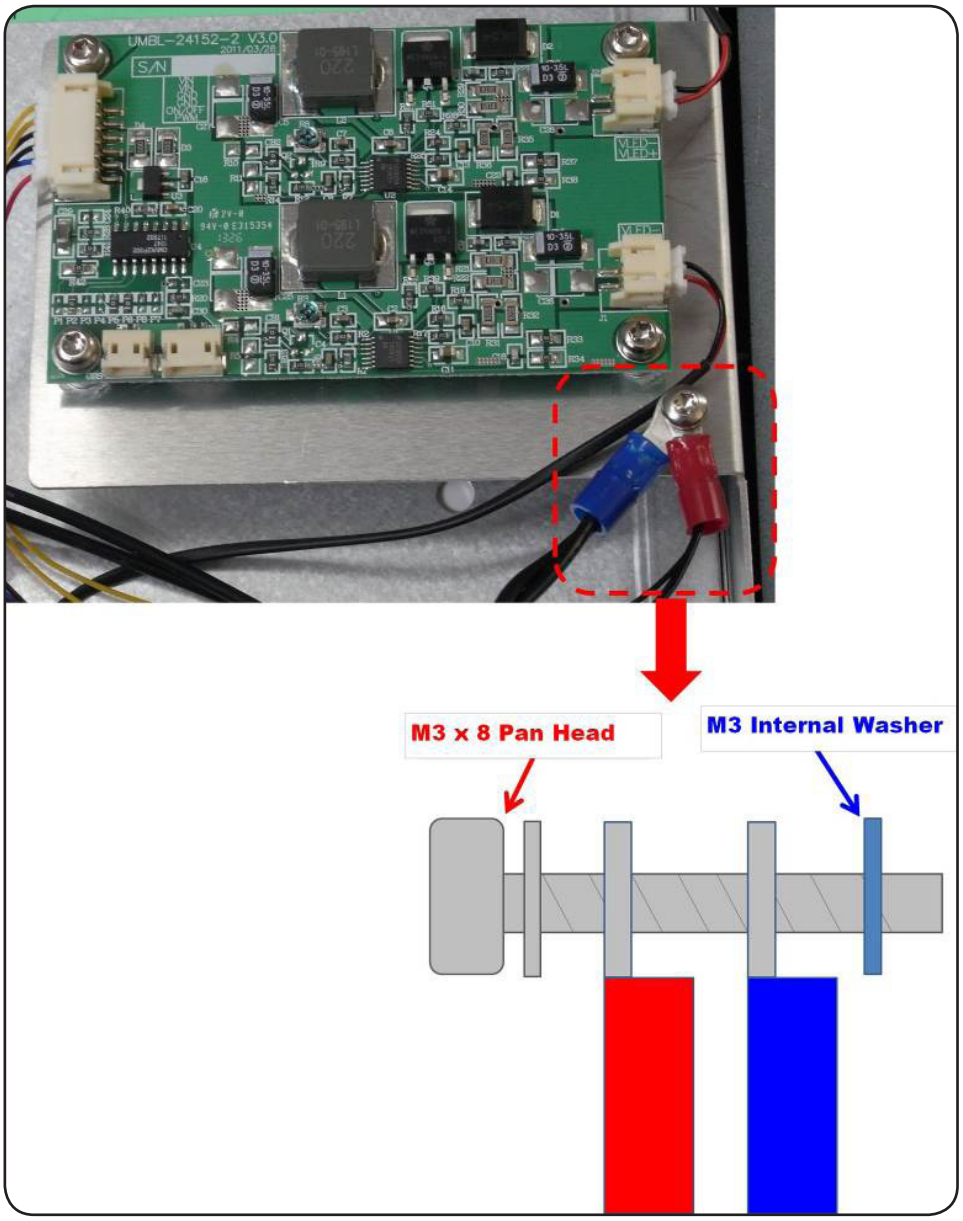
PRO2

STEP 4 Secure LED Driver Cable ring terminals in place using 1 Off M3 x 8 Pan Head screw and 1 Off M3 Internal Washer.



STEP 5 Secure cables to the screen assembly using 1 Off Cable tie.

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